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# Stellingen

behorende bij het proefschrift

## Exciton localization and optical spectroscopy of linear and tubular J-aggregates

door Erik André Bloemsma

1. Referring to cylindrical aggregates as quasi one-dimensional is correct from a geometrical perspective, from an optical spectroscopy and exciton localization point of view it is not.
2. The optical spectra and spatial structure of double-walled C8S3 aggregates have been unraveled through joint experimental and theoretical efforts. Neither experiment nor theory alone could have achieved a similar level of understanding about the origin of the exciton transitions in these systems.
3. Cylindrical structures protect the delocalized nature of the excitons against the localization effects of disorder, which makes them potentially good candidates for applications in artificial light-harvesting complexes.
4. Measurements of polarization properties of the individual optical exciton transitions in cylindrical aggregates can reveal whether the typical exciton localization length in the azimuthal direction will vary from aggregate to aggregate.
5. Als er een monotoon stijgend verband bestaat tussen de kwaliteit van koffie en de productiviteit van onderzoekers, dan heeft de universiteit zichzelf geen goede dienst bewezen met de aanschaf van de nieuwe koffieautomaten.
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